

CLAIMS

1. A compressor comprising:
a hermetic container storing oil in it,
an electric motor including a stator and a rotor which are contained in said hermetic container, and a compressor unit linked to be driven by said electric motor,

said compressor unit including a shaft that is extending in the vertical direction and making rotating motion by said electric motor, and an oil pump which is formed at the lower end of said shaft and connected to said oil,

wherein:

said oil pump includes a helical groove provided on the outer periphery of said shaft, a cup-shaped sleeve which loosely covers the outer peripheral lower end part of said shaft so that it covers the lower end of said helical groove and is coupled so as to be free in rotational relation from said shaft, and rotation-suppressing means for suppressing the rotation of said sleeve.

2. A compressor in accordance with Claim 1 in that said rotation suppression means is a bracket, which is held between said stator and said sleeve and

fixes said sleeve to said stator.

3. A compressor in accordance with Claim 1 in that said rotation suppression means is wings formed on the outer periphery of said sleeve and generates a viscous resistance with respect to the oil.

4. A compressor in accordance with Claim 1 in that said rotation suppression means is rotating permanent magnets fixed directly or indirectly to both the said sleeve and the said hermetic container, and a member which magnetically acts to them.

5. A compressor in accordance with either one of Claim 1 through Claim 4 in that

said shaft has, along its shaft axis, a vertical hole which is extending in the vertical direction and is connected to the sliding-motion part formed between the shaft and a shaft receiving member which receives said shaft allowing the sliding and rotating motion therebetween, and

the upper end of said helical groove is connected to said vertical hole.

6. A compressor in accordance with either one of Claim 1 through Claim 5 in that said sleeve is

formed with synthetic resin by integration molding.

7. A compressor in accordance with either one of the Claim 1 through the Claim 6, wherein said compressor unit is supported elastically in said hermetic container.

8. A compressor in accordance with either one of the Claim 1 through the Claim 7, wherein said motor unit is driven in operation frequencies including frequencies lower than the power source frequency.